IFW



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.:

MGU-0025

Inventors:

Damha et al.

Serial No.:

10/748,475

Filing Date:

December 30, 2003

Examiner:

Not Yet Assigned

Group Art Unit:

1635

Title:

Compositions and Methods for Inhibiting

RNase H Activity of Retroid Reverse

Transcriptase

I, Jane Massey Licata, Registration No. 32,257, certify that this correspondence is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to the Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450

On this date: October 1, 2004

Javasserin

Jane Massey Licata, Registration No. 32,257

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

## INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).

(XX) In accordance with §1.97(b), since this Information

Disclosure Statement is being filed either within three

months of the filing date of the above-identified

application, within three months of the date of entry into the national stage of the above identified application as set forth in §1.491, or before the mailing date of a first Office Action on the merits of the above-identified application, no additional fee is required.

- ( ) In accordance with §1.97(c), this Information Disclosure Statement is being filed after the period set forth in §1.97(b) above but before the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311, therefore:
  - ( ) Certification in Accordance with §1.97(e) is attached hereto; or
  - ( ) Authorization to charge Deposit Account No. 50-1619 the fee of \$180.00 as set forth in \$1.17(p) is provided.
- ( ) In accordance with §1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311 but before the payment of the Issue Fee, therefore included are: Certification in Accordance with §1.97(e); Petition Requesting Consideration of the Information Disclosure Statement; and the fee of \$130.00 as set forth in §1.17(I)(1).
- (XX) Copies of each of the references listed on the attached Form PTO-1449 (modified) are enclosed herewith.

( ) In accordance with §1.98(d), copies of some or all of the references listed on the attached Form PTO-1449 (modified) are not enclosed herewith because they were previously submitted to the U.S. Patent and Trademark Office in prior application Serial No. \_\_\_\_\_\_, filed \_\_\_\_\_\_\_, for which a claim for priority under 35 U.S.C. §120 has been made in the instant application.

Please charge any deficiency or credit any overpayment to Deposit Account No. 50-1619. This form is submitted in duplicate.

- ( ) The relevance of the listed references in a foreign language is as stated in the specification at pages @@.
- (XX) All listed references are in the English language.

Respectfully submitted,

Jawasstust

Jane Massey Licata Registration No. 32,257

Date: October 1, 2004

Licata & Tyrrell P.C. 66 E. Main Street Marlton, New Jersey 08053

(856) 810-1515



Sheet **01** of **02** 

## Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Docket No. MGU-0025 Applicant Damha et al. Filing Date December 30, 2003 Group 1635

(obe beverar briceeb ir necesbary)					
U.S. Department of Commerce			Filing Date December 30,	2003	Group <b>1635</b>
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
	AA	Andreola et al., "DNA Aptamers Selected against the HIV- 1 Rnase H Display in Vitro Antiviral Activity", Biochemistry 2001 40:10087-10094			
	AB	Borkow et al., "Inhibition of the Ribonuclease H and DNA Polymerase Activities of HIV-1 Reverse Transcriptase by N-(4-tert-Butylbenzoyl)2-hydroxy-1-naphthaldehyde Hydrazone", Biochemistry 1997 36:3179-3185  Chen et al., "Selection of High-Affinity RNA Ligands to Reverse Transcriptase: Inhibition of cDNA Synthesis and RNASE H Activity", Biochemistry 1994 33:8746-8756  Clusel et al., "Ex vivo regulation of specific gene expression by nanomolar concentration of double-stranded dumbbell oligonucleotides", Nucleic Acids Research 1993 21(15):3405-3411  Hannoush et al., "Remarkable Stability of Hairpins Containing 2',5'-Linked RNA Loops", J. Am. Chem. Soc. 2001 123:12368-12374  Lim et al., "Sequence-independent inhibition of RNA transcription by DNA dumbbells and other decoys", Nucleic Acids Research 1997 25(3):575-581  Loya et al., "Illimaquinone, a Selective Inhibitor of the RNase H Activity of Human Immunodeficiency Virus Type 1 Reverse Transcriptase", Antimicrobial Agents and Chemotherapy 1990 34(10):2009-2012  Loya et al., "The Interaction of Illimaquinone, a Selective Inhibitor of the RNase H Activity, with the Reverse Transcriptases of Human Immunodeficiency and Murine Leukemia Retroviruses", J. Biol. Chem. 1993 268(13):9323-9328			
	AC				
	AD				
	AE				
	AF				
	AG				
	АН				
	AI	Mizrahi et al., "Mutagenesis of the Conversed Aspartic Acid 443, Glutamic Acid 478, Asparagine 494, and Aspartic Acid 498 Residues in the Ribonuclease H Domain of p66/p51 Human Immunodeficiency Virus Type I Reverse Transcriptase", J. Biol. Chem. 1994 269(30):19245-19249			
			D. ED. GOV.G.		

EXAMINER

DATE CONSIDERED

## Serial No. Docket No. Form PTO-1449 Modified MGU-0025 10/748,475 List of Patents and Publications Applicant Cited by Applicant Damha et al. (Use several sheets if necessary) Filing Date Group U.S. Department of Commerce December 30, 2003 1635 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Park et al., "Inhibition of HIV-1 Replication by a New Type of ΑJ Circular Dumbbell RNA/DNA Chimeric Oligonucleotides", Biochemical and Biophysical Research Communications 2000 270:953-960 AΚ Tan et al., "Inhibition of the RNASE H Activity of HIV Reverse Transcriptase by Azidothymidylate", Biochemistry 1991 30(20):4831-4835 Tarrago-Litvak et al., "Inhibitors of HIV-1 Reverse Transcriptase ALand Integrase:Classical and Emerging Therapeutical Approaches", Current Pharmaceutical Design 2002 8:595-614 Wasner et al., "Physicochemical and Biochemical MA r 1 Properties of 2',5'-Linked RNA and 2',5':3',5'-RNA "Hybrid" Duplexes", Biochemistry 1998 37:7478-7486 Gao et al., "Phosphorothioate Oligonucleotides Are Inhibitors AN of Human DNA Polymerases and RNase H:Implications for Antisense Technology" Molecular Pharmacology 1992 41:223-229 Zhan et al., "Catalytically Distinct conformations of the Ribonuclease H of AΟ HIV-1 Reverse Transcriptase by Substrate Cleavage Patterns and Inhibition by Azidothymidylate and N-Ethylmaleimide", Biochemistry 1994 33:1366-1372 . 14 -17 -**EXAMINER** DATE CONSIDERED